

REMARKS/ARGUMENTS

Applicants have received the Office action dated November 9, 2009, in which the Examiner: 1) rejected claims 1-18 under 35 U.S.C. § 112, second paragraph, as being allegedly indefinite; 2) rejected claims 1 and 10 under 35 U.S.C. § 103(a) as being obvious over U.S. Pat. No. 7,523,454 ("*Romero*") in view of U.S. Pub. No. 2003/0055969 ("*Begun*"); 3) rejected claims 2-3 and 11-12 as being obvious over *Romero* in view of *Begun* and U.S. Pat. No. 6,807,572 ("*Yu*"); 4) rejected claims 4-5 and 13-14 as being obvious over *Romero* in view of *Begun* and U.S. Pat. No. 6,085,216 ("*Huberman*"); 5) rejected claims 6-7 and 15-16 as being obvious over *Romero* in view of *Begun*, *Huberman* and U.S. Pat. No. 6,801,926 ("*Shisler*"); and 6) rejected claims 8-9 and 17-18 as being obvious over *Romero* in view of *Begun* and U.S. Pub. No. 2003/0013951 ("*Stefanescu*"). Based on the amendments and arguments presented herein, Applicants respectfully request reconsideration and allowance of the pending claims.

I. REJECTIONS UNDER § 112, SECOND PARAGRAPH

The essential inquiry pertaining to [the definiteness] requirement is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. Definiteness of claim language must be analyzed, not in a vacuum, but in light of: (A) The content of the particular application disclosure; (B) The teachings of the prior art; and (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. See MPEP § 2173.02. Further, a claim term that is not used or defined in the specification is not indefinite if the meaning of the claim term is discernible. *Bancorp Services, L.L.C. v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1372, 69 USPQ2d 1996, 1999-2000 (Fed. Cir. 2004).

The Examiner rejected claims 1-18 as indefinite. More specifically, the Examiner argues that the claim 1 is indefinite because the granularity of the phrase "changes a power state" is not clear. See Office Action dated 11/09/09, page 2. Applicants submit that the phrase "changes a power state" is sufficiently clear, especially in light of Applicants' specification. For example, page 5,

line 20 – page 6, line 11 of Applicants' specification describes on/off power states as well as reduced power states. The granularity of power states related to the phrase "changes a power state" is either irrelevant or is sufficiently clear for purposes of definiteness.

The Examiner also argues the phrase "based on a power management rank" is indefinite as it is unclear how the power state reflects the power management rank. See Office Action dated 11/09/09, page 2. Applicants submit that the phrase "based on a power management rank" is sufficiently clear, especially in light of Applicants' specification. For example, page 6, line 28 – page 7, line 27 describes assigning a rank to each storage access subsystem and selectively changing the power states based on the assigned ranks. The relationship of the power states and the power management ranks in claim 1 is sufficiently clear, especially in light of the specification.

The Examiner also argues the phrase "a transaction analyzer that determines a priority metric for an incoming access transaction to the persistent storage" is indefinite since the technique for determining the priority metric is not clear. See Office Action dated 11/09/09, page 2. Applicants submit that the above phrase is sufficiently clear, especially in light of Applicants' specification. For example, page 7, line 29 – page 9, line 29 describes the above limitations, including how priority metrics are determined.

The Examiner also argues the phrase "by matching the priority metric to the power management ranks" is unclear since the matching technique is not clear. See Office Action dated 11/09/09, page 3. Applicants submit that the above phrase is sufficiently clear, especially in light of Applicants' specification. For example, page 10, line 29 – page 11, line 19 describes the above matching limitations.

The Examiner rejected claim 10 for the same reasons as given for claim 1. Applicants submit that claim 10 is sufficiently clear for the same reasons as given for claim 1. Based on the foregoing, Applicants respectfully request that the indefiniteness rejections of claim 1-18 be withdrawn.

II. § 103 REJECTIONS

The Examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. The key to supporting any rejection under 35 U.S.C. § 103 is the clear and explicit articulation of the reason(s) why the claimed invention would have been obvious. *MPEP* § 2141 (citing *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007)). Articulated reasoning with a rational underpinning is required to support a conclusion of obviousness, rather than mere conclusory statements. Further, to reach a proper determination, the Examiner must step backward in time and into the shoes worn by the hypothetical “person of ordinary skill in the art.” In reaching a determination, the Examiner must avoid impermissible hindsight and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

The Examiner rejected claims 1 and 10 as being obvious over *Romero* in view of *Begun*. Claim 1, in part, requires “a transaction analyzer that determines a priority metric for an incoming access transaction to the persistent storage and that transfers the incoming access transaction to one of the storage access subsystems by matching the priority metric to the power management ranks.” The Examiner cites *Romero* at col. 5, lines 5-33 and col. 2, lines 47-57 as teaching the above limitations. See Office Action dated 11/09/09, page 4, item 4. The cited passages of *Romero* describe routing transactions to partitions based on the configuration of the partitions. The partitions may be ranked based on their configurations. See col. 2, lines 55-57. The Examiner concedes that *Romero* does not teach the claimed “power management ranks” and cites *Begun* at paragraphs [0006] and [0035] to support the obviousness rejection. See Office Action dated 11/09/09, page 4, items 5 and 6. The cited passages of *Begun* teach scaling down power of a device (e.g., a high-power server) to the current workload on the network. However, *Begun* does not teach power management ranks. The Examiner suggests that *Begun* could be modified to scale down power based on *Romero*’s ranks. Applicants’ disagree. *Begun* describes powering down individual servers that are not busy. Adding ranks to *Begun*’s system as suggested by the Examiner improperly changes the principle of

operation of *Begun*'s system, which relies on detecting idleness in individual devices and, in response, powering them down. See MPEP § 2143.01, section VI. Thus, ranks would not be used with *Begun*'s system or would improperly change *Begun*'s technique.

Further, there is no evidence that the Examiner's proposed combination teaches or suggests "[transferring] the incoming access transaction to one of the storage access subsystems by matching the priority metric to the power management ranks" as is required in claim 1. As recognized by the Examiner, *Romero* does not teach the claimed "power management ranks." Instead of teaching the above limitations, the proposed combination of *Romero* and *Begun* would assign transactions based on configurations/ranks as in *Romero* and also power down idle servers (regardless of rank) as in *Begun*. Due to the deficiencies of *Romero* and *Begun*, the Examiner has failed to clearly and explicitly articulate the reason(s) why claim 1 would have been obvious as is required to establish a prima facie case of obviousness. For at least these reasons, claim 1 and its dependent claims are allowable over *Romero* and *Begun*.

Claim 10 requires "determining, by a server, a priority metric for an incoming access transaction to a persistent storage in the information system" and "selecting, by the server, which of a set of storage access subsystems is to be used when performing the incoming access transaction by matching the priority metric to a power management rank for each storage access subsystem." For much the same reasons as given for claim 1, *Romero* and *Begun* do not teach or suggest the "power management rank" limitations of claim 10. For at least these reasons, claim 10 and its dependent claims are allowable over *Romero* and *Begun*.

The Examiner rejected claims 2-3 and 11-12 as being obvious over *Romero* in view of *Begun* and *Yu*. Claims 2-3 depend from claim 1 and are allowable over *Romero* and *Begun* for the same reasons as given for claim 1. Meanwhile, claims 11-12 depend from claim 10 and are allowable over *Romero* and *Begun* for the same reasons as given for claim 10. *Yu* does not overcome

the deficiencies of *Romero* and *Begun* with respect to the power management rank limitations of claims 1 and 10. In addition, claim 3 requires “the priority metric is based on a frequency of access of a database table referenced in the incoming access transaction” and claim 12 requires “determining the priority metric includes determining a frequency of access of a database table referenced in the incoming access transaction.” As noted by the Examiner, *Yu* teaches prioritizing requests based on the frequency of such requests. See col. 2, lines 50-54. However, *Yu* does not specifically teach determining frequency of accessing a database table referenced in the incoming access transaction as in claims 3 and 12. Due to the deficiencies of *Romero*, *Begun* and *Yu*, the Examiner has failed to clearly and explicitly articulate the reason(s) why claims 2-3 and 11-12 would have been obvious as is required to establish a prima facie case of obviousness. Based on the foregoing, claims 2-3 and 11-12 are allowable over *Romero*, *Begun* and *Yu*.

The Examiner rejected claims 4-5 and 13-14 as being obvious over *Romero* in view of *Begun* and *Huberman*. Claims 4-5 depend from claim 1 and are allowable over *Romero* and *Begun* for the same reasons as given for claim 1. Meanwhile, claims 13-14 depend from claim 10 and are allowable over *Romero* and *Begun* for the same reasons as given for claim 10. *Huberman* does not overcome the deficiencies of *Romero* and *Begun* with respect to the power management rank limitations of claims 1 and 10. Due to the deficiencies of *Romero*, *Begun* and *Huberman*, the Examiner has failed to clearly and explicitly articulate the reason(s) why claims 4-5 and 13-14 would have been obvious as is required to establish a prima facie case of obviousness. Based on the foregoing, claims 4-5 and 13-14 are allowable over *Romero*, *Begun* and *Huberman*.

The Examiner rejected claims 6-7 and 15-16 as being obvious over *Romero* in view of *Begun*, *Huberman* and *Shisler*. Claims 6-7 depend from claim 1 and are allowable over *Romero* and *Begun* for the same reasons as given for claim 1. Meanwhile, claims 15-16 depend from claim 10 and are allowable over *Romero* and *Begun* for the same reasons as given for claim 10.

Huberman and *Shisler* do not overcome the deficiencies of *Romero* and *Begun* with respect to the power management rank limitations of claims 1 and 10. In addition, claims 6-7 and 15-16 require relating computational complexity to a number of database tables referenced in an incoming access transaction. The Examiner cites *Shisler* at col. 11, lines 27-32 as teaching the limitations of claims 6-7 and 15-16. See Office Action dated 11/09/09, page 8, item 23. However, the cited passage only mentions changing a database record, not determining computational complexity based on the number of database tables to be accessed for an incoming access transaction. Due to the deficiencies of *Romero*, *Begun*, *Huberman* and *Shisler*, the Examiner has failed to clearly and explicitly articulate the reason(s) why claims 6-7 and 15-16 would have been obvious as is required to establish a prima facie case of obviousness. Based on the foregoing, claims 6-7 and 15-16 are allowable over *Romero*, *Begun*, *Huberman* and *Shisler*.

The Examiner rejected claims 8-9 and 17-18 as being obvious over *Romero* in view of *Begun* and *Stefanescu*. Claims 8-9 depend from claim 1 and are allowable over *Romero* and *Begun* for the same reasons as given for claim 1. Meanwhile, claims 17-18 depend from claim 10 and are allowable over *Romero* and *Begun* for the same reasons as given for claim 10. *Stefanescu* does not overcome the deficiencies of *Romero* and *Begun* with respect to the power management rank limitations of claims 1 and 10. In addition, claims 9 and 18 determine the priority metric based on a size of a database table in the persistent storage to which the query constraints are to be applied. The Examiner cites *Stefanescu* paragraph [0107] as teaching the above limitations of claims 9 and 18. Although *Stefanescu* mentions query constraints, *Stefanescu* does not specifically teach or suggest a priority metric is based on a size of a database table as in claims 9 and 18. Due to the deficiencies of *Romero*, *Begun* and *Stefanescu*, the Examiner has failed to clearly and explicitly articulate the reason(s) why claims 8-9 and 17-18 would have been obvious as is required to establish a prima facie case of obviousness. Based on the foregoing, claims 8-9 and 17-18 are allowable over *Romero*, *Begun* and *Stefanescu*.

III. CONCLUSION

In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the cited art which have yet to be raised, but which may be raised in the future.

Applicants respectfully request reconsideration and that a timely Notice of Allowance be issued in this case. It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's Deposit Account No. 08-2025.

Respectfully submitted,

/Alan D. Christenson/

Alan D. Christenson
PTO Reg. No. 54,036
CONLEY ROSE, P.C.
(713) 238-8000 (Phone)
(713) 238-8008 (Fax)
ATTORNEY FOR APPLICANTS

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
Legal Dept., M/S 35
3404 E. Harmony Road
Fort Collins, CO 80528-9599